

Patent Claims

1. Link plate (1) for a chain link of an energy guide chain with at least one fixing means (4) which is suitable and is intended for separable joining of the link plate (1) with a transverse link (14), where the fixing means (4) has at least one locking means (5) and at least one torsional element (6) is provided which is joined to the fixing means (4) and a wall of the link plate (1) in such a way that it can be pivoted essentially around a longitudinal axis of the link plate (1).
2. Link plate (1) according to Claim 1, characterized by the fact that the fixing means (4) is arranged in a receptacle (7) formed in the wall, extending at least from an inner wall (8) in the direction of an outer wall (9) of the link plate (1).
3. Link plate according to Claim 1 or 2, characterized by the fact that the fixing means (4) and the link plate (1) are formed in one piece.
4. Link plate according to Claim 1 or 2, characterized by the fact that the fixing means (4) and the link plate (1) are made of several pieces.
5. Link plate according to Claim 4, characterized by the fact that the fixing means (4) can be joined to the receptacle (7) in a separable manner, preferably by locking, with positive or non-positive locking.
6. Link plate according to one of the previous claims, characterized by the fact that the torsional element (6) is designed as at least one torque rod.
7. Link plate according to one of the previous claims, characterized by the fact that the wall and/or the at least one fixing means are made of at least one plastic, preferably an elastomeric plastic, a renewable raw material and/or metal.
8. Link plate according to one of the previous claims, characterized by the fact that at least one pivoting axis receptacle is formed for

accepting a pivoting axis of a transverse link and/or of an intermediate piece.

9. Link plate according to one of the previous claims, characterized by the fact that transverse locking means are formed which prevent essentially a relative movement of the link plate in a direction essentially transverse to the longitudinal axis of the link plate when joining the link plate with a transverse link.
10. Link plate according to one of the previous claims, characterized by the fact that longitudinal locking means are formed which essentially prevent a relative movement of the transverse link in a direction essentially parallel to the longitudinal axis of the link plate when joining the link plate to a transverse link.
11. Link plate according to one of the previous claims, characterized by the fact that means are formed for limiting the pivoting which limit the pivoting of the fixing means.
12. Link plate according to one of the previous claims, characterized by the fact that the fixing means (4) have at least one tool access region (12).
13. Chain link for an energy guide chain with two link plates which are connected to one another by at least one transverse link (14), where at least one chain link is formed according to one of Claims 1 to 12.
14. Chain link according to Claim 13, characterized by the fact that a transverse link (14) cooperates with at least one fixing means (4).
15. Chain link according to Claim 14, characterized by the fact that at least one locking means (5) cooperates with a locking piece receptacle of the transverse link (14).

16. Chain link according to Claim 15, characterized by the fact that the locking means and locking receptacle can be joined to one another in a positive or non-positive locking manner.
17. Chain link according to one of Claims 13 to 16, characterized by a minimum force necessary for separating the transverse link and the fixing means, especially the locking means and the locking recess.
18. Chain link according to one or several of the previous Claims 13 to 17, characterized by the fact that longitudinal and/or transverse locking receptacles are formed on the transverse link which can be engaged with the longitudinal and/or transverse locking means in a positive or non-positive locking manner.
19. Chain link according to one of Claims 13 to 18, characterized by the fact that, at least on one joining side between transverse link and link plate, at least one pivoting means is formed on the transverse link, which can be engaged with the pivoting axis receptacle.
20. Chain link according to one of Claims 13 to 19, characterized by the fact that at least one intermediate piece is provided, one side of which accepts the joining side of the transverse link, and the other side of which has at least one pivoting means which can be engaged with the pivoting axis receptacle of the plate link.
21. Energy guide chain comprising at least one chain link according to one of Claims 13 to 20.
22. Fixing means which is suitable and is intended for producing a separable joint between the link plate and a transverse link, where the fixing means can be joined to a locking means joined to at least one torsional element, where the at least one torsional element can be joined with a wall of the link plate so that it can be pivoted essentially around a longitudinal axis of the link plate.

23. Fixing means according to Claim 22, characterized by the fact that the torsional element is formed as at least one torque rod.
24. Fixing means according to Claim 22 or 23, characterized by the fact that the locking means is arranged between two torsional elements.

Summary

For the purpose of providing a simplified manner for the production of a joint between a transverse link and a link plate for a chain link of an energy guide chain, it is proposed that the link plate has a fixing means which is suitable for and intended for separable joining of the link plate with a transverse link. The fixing means has at least one locking means. Furthermore, at least one torsional element is provided. This is joined to the fixing means and a wall of the link plate so that it can be pivoted essentially around a longitudinal axis of the link plate. For releasing at least one transverse link, the at least one torsional element is twisted essentially around a longitudinal axis of the link plate. Through this design of a link plate according to the invention, safe and reliable joint between the link plate and a transverse link is made possible.